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ABSTRACT

This document contains four papers from a symposium on change processes in organizations. "Mid-stream Corrections: Decisions Leaders Make during Organizational Change Processes" (David W. Frantz) analyzes three organizational leaders to determine whether and how they take corrective actions or adapt their decision-making processes when unanticipated situations arise during times of organizational change. "A Case Study Using a Large Scale Interactive Event to Implement Organizational Change in a Nonprofit Government Organization" (Gary N. McLean, Dominic G. Kamau) explores the process of planning, implementing, and following up after a large-scale interactive event designed to implement changes in an organization. The role played by organizational memory and collective-level scripts in guiding the thoughts and actions of organization members is explored in "Organizational Memory and Scripts: Sources of Resistance to Change or Sources of Lessons from the Past?" (Suzanne L. Geigle). "Implementing High Performance Work Systems: Planned Change or an Emergent Learning Process?" (Martha A. Gephart) reports the results of a study designed to determine which of two competing models--a planned change model or an emergent learning approach--best explained the events and processes of change described by practitioners and consultants involved in efforts to create high-performance work systems. (MN)

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ED 428 238

15 **Change Processes in Organization**

Chair: Peter Kuchinke, University of Illinois

Mid-stream Corrections: Decisions Leaders Make During Organizational Change Processes

David W. Frantz, Purdue University

A Case Study Using a Large Scale Interactive Event to Implement Organizational Change in a Nonprofit Government Organization

Gary N. McLean, University of Minnesota

Dominic G. Kamau, University of Minnesota

Organizational Memory and Scripts: Sources of Resistance to Change or Sources of Lessons from the Past?

Suzanne L. Geigle, George Washington University

Implementing High Performance Work Systems: Planned Change or an Emergent Learning Process

Martha A. Gephart, Columbia University

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Mid-stream Corrections: decisions leaders make during organizational change processes

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Today's leaders often need to implement organizational change strategies such as: continuous quality improvement, re-organizations and changing performance norms. As these change initiatives are implemented, leaders are often faced with situations they did not anticipate. These moments provide opportunities to adjust decisions. An analysis of three organizational leaders will be used to determine if and how organizational leaders take corrective actions or make adaptations to their decision-making processes at these moments.

Various metaphors and images have been used to describe organizations and their leaders—from sports to music to physics (Marshak, 1994; Morgan, 1997). I will use the image of a football team quarterback to introduce my area of research. A football team's success depends on the ability of the quarterback and the coaching staff to anticipate, out-guess and "read" the other team's formations. Most coaches develop a game plan, a set list of plays, for the entire game. Individual plays may be directed or "called" by the quarterback in a huddle, signaled in from the sidelines to the quarterback or another player, delivered by a player coming in from off the sideline or even transmitted via wireless technology.

Sometimes, as the quarterback is getting set to receive the ball, the quarterback observes a particular formation on the opposing team and calls an "audible." This audible command alerts the team members that the original play is no longer valid and a new play has been substituted. Nothing is as interesting to me as the "audible," a decision made by the quarterback at the line of scrimmage as the play is about to unfold. This is a decision to disregard part of the game plan. If it works, the quarterback is a hero; if it fails, he is a goat.

This image describes an essential leadership skill—calling an audible—even when a good game plan has been designed. My research focuses on understanding the decision-making process that leaders go through in calling audibles; how do leaders decide to deviate from their game plans (particularly at the tactical level) or decide to remain with a pre-established implementation plan? This decision-making process is rooted in a leader's perception and interaction with a changing organizational context.

When organizational leaders are implementing organization-wide change programs such as continuous quality improvement initiatives, reorganizations or re-engineering, they are likely to have numerous opportunities to make "audible" calls. Therefore, this research will focus more narrowly on the decision-making processes of key leaders during the implementation process of change programs. It will examine how three different organizational leaders in different organizational environments chose to stay with the original game plan or to call an "audible." This will be done by breaking long term change processes into key decision points or "audible opportunities," as defined collaboratively between the researcher and the research participants. For example, a university chancellor prepares a plan to implement a comprehensive academic restructuring strategy. One third of the way into the process, a small but influential group of faculty form an AAUP chapter in a non-union environment. The chancellor, if aware of this action, may choose to ignore it, change the restructuring proposal, or adopt a new tactical plan to implement the proposed changes (other options are possible).

Much has been written about the subject of organizational change (Dunphy, Dexter & Stace, 1993; Tushman & Anderson 1997). Numerous articles and books have been written about diagnosing the need to change, developing change plans, selecting organizational change alternatives, the stages of organizational change and resistance to change (Kotter, 1996; Strebel, 1994). Case analyses have been produced to show how business changes are produced (Van De Ven and Poole, 1995).

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Considerably less attention has been paid to how changes occur once an implementation plan is initiated. As practitioners and academic professionals, we gravitate toward designing and defining *change outcomes* and evaluation measures more than *tactical implementation plans (change tactics)*. Frequently, change programs do not go according to plan; variations and detours occur along the way. While it is important to have a clearly defined game plan for introducing change, a leader must continually assess and reassess the organization's response to change *implementation* processes.

Research Questions and Hypotheses

The focal research questions are: 1) as organizational change initiatives are occurring, is the leader making judgments about the relative success/failure or progress/lack of progress toward change outcomes and 2) how is this information used to alter an implementation plan or reinforce the current plan? Three subsidiary sets of questions are also discussed:

A) if alterations are made, what rationale is used? What informs these decisions? Are these communicated to participants? If so, how?

B) if alterations are made, is the leader more likely to alter change outcomes, the process used to introduce change or the timetable for such change efforts (the latter two being viewed as change tactics)?

C) to what extent are change implementation processes and interactive changes in implementation decisions shaped by the characteristics of the industry in which the organization is situated?

These questions have served as the basis for developing interview formats with the research participants and to guide the data collection process.

It was hypothesized that organizational leaders continually monitor organizational responses to change implementation procedures and that adaptations will be made based on their perceptions of the organization. When adaptations were made, however, the rationale for the changes might not be apparent or communicated to organizational participants. It was further hypothesized that organizational leaders would generally opt for changing tactical implementation plans rather than revise the change outcomes. Finally, it was hypothesized that the individual's personal approach to change would have greater influence than the organization's industry characteristics in this decision-making process.

Methodology

Research Method. A qualitative research model is being applied to this research project. Two qualitative techniques are being utilized: a collective case study approach (Stake, 1995, p. 3-4) and a phenomenological analysis of the data collected (Moustakas, 1994). Coding of interview data will also be used but will play a secondary role. Only that portion of the organizational case studies related to leadership decisions is being presented in this paper.

Research Participants. Three different organizations and their leaders are involved in this study: a plastics manufacturer with 200 employees, a university with 2200 students and a police department with 70 officers. Each one of the organizations has been, is or will be completing organizational change processes. For purposes of this paper, the following summarizes the organizational contexts:

Organization	Leader	Characteristic	Issue
Plastics Manufacturer	Plant Manager	Business	Continuous Improvement
University	Chancellor	Collegial	Academic Restructuring
Police Department	Chief of Police	Hierarchical	Department Restructuring

These three organizations were selected because of their potential to provide insight into how particular leaders approach the change process. The different contexts in which the organizations are situated make generalizations more difficult. However, we can be more attentive to the way in which an individual leader interacts with his or her environment, including

sensitivity to the industry context. As a researcher, I have had various levels of personal involvement in each organization ranging from outside observer to organizational member to consultant. All three organizations are located in the Midwest.

Data Collection. The data has been collected from the following sources: personal interviews with notes, video-taped interviews, copies of newspaper articles about the organizations and internal documents. In addition, a written questionnaire about decision-making style was completed by each of the organizational leaders prior to being interviewed. Between the three organizations, more than 50 interviews have been conducted and more than 15 meetings have been observed. These have been at all levels within the organizations. The research presented here is limited to available public information, questionnaire results and interviews with each of the three organizational leaders. More information will be presented in a second phase of the research. Negotiations are being completed to disclose the identity of each organization.

Data Analysis. A phenomenological approach to analyzing the data was chosen for several reasons. First, the nature of the subject matter itself heavily involves the observations, interpretations and evaluations of both the researcher and the participants. Second, as the researcher has had personal involvement with the organizations, it is a well-suited method. As noted above, where possible, a triangulation approach to data analysis will be taken. The focus, however, will be on understanding the observations and perceptions of the three key leaders in the study.

Results and Findings

Each organizational leader had a somewhat different approach to decision-making as might be suspected. The small sample size, three organizational leaders, makes it difficult to generalize about decision-making methods. Nevertheless, there were some common themes and a comparison of the three organizational leaders yields some interesting results. It is difficult to convey both some of the differences and the common points between the three while preserving the integrity of the data. I will present several different ways of portraying the data: narrative portraits of each leader's decision-making approach, graphic summary along various decision-making dimensions, and an identification of common themes. Then, these findings will be related to the hypotheses outlined earlier in the paper.

Narrative Portraits of Interviewed Organizational Leaders. These narrative portraits are built on the results obtained from completed written questionnaires, video-taped interviews and personal observations made in the respective work settings. Although they may not do justice to each of the individuals, they are designed to provide a sense of each individual. These are impressions and themes which have been made on the basis of the above sources. For each individual, there will be a general description and then a specific decision area will be used as an example.

Portrait One: Plant Manager. The plant manager has been with the company since January, 1996. He is one of the few managers who is not a family member. His managerial experience prior to his current assignment was with larger corporations. He was brought in with expectations that he would "take the plant to the next level" and upgrade the managerial quality of the manufacturing site. The plant manager's approach to decision-making is a mixed approach. The cornerstone of his process is on "creating the conditions" for people to come to the right decision. He has a strong conviction that if people are able to view the right information and if you can relate the decision to their values, the right decision will be made. One of his comments was "if everything has been done right, there is no trial balloon."

He focuses on three goals: customer service, quality and profitability. He notes that his ability to make decisions has been constrained by the availability of quality people, a situation that continues to improve over time. When he started his tenure, he was making many more decisions than he is today, particularly at the tactical level. He believes that the company runs best when he sets the general tone or direction and when the middle management crew develops the tactics. Presently, he believes that 90% of the decisions are now already made before they get to his desk, but that employees may not see this—they may still see him as making these decisions.

Being a past college football player, the plant manager thought the notion of audibles was great and explained also that the defensive units also called audibles. In fact, he says his offense was almost an entire series of audibles. He compares this to the sense of adaptability which successful managers must have. Much of his time is spent thinking about how he will approach issues and people who are influential in the decision process. He likes to stay on the course toward the goal and relentlessly pursue it—adjusting tactics or time frames as needed, but not adjusting the goal.

He describes himself as more intuitive, analytical, and willing to consider a number of alternative solutions to problems. He makes decisions both on his own and with consultation, views decisions as successive smaller events, and evaluates decisions very strongly in light of both personal and organizational values and beliefs. Decision outcomes are evaluated in relation to a plan.

One of the decision examples used was the implementation of a three day ship program for basic material. Customers have pushed for quicker lead times for material shipments. This program has been implemented within the past year and has had its ups and downs in terms of success. He acknowledges that people may have seen this as arising from the sales force or customer demand (external factor), but in fact, it is close to his personal goals. The program has been marked by an increasing number of on-time deliveries, but still short of 100%. There have been times during the implementation process where middle managers have suggested that the idea should be dropped. He cites this as an example where maintaining the goal is important, even if not fully accomplished. He continues to spend time with people, identifying what their personal values are and trying to relate the goals of the program to these values.

Portrait Two: University Chancellor. The Chancellor has been employed for more than twenty years at the institution in various teaching and administrative posts. He has served as Chancellor since April, 1995. The Chancellor sees decisions as being made more in response to the organizational environment—they present themselves to you. He works with a strong set of personal values, closely aligned to the organization's because of the long tenure with the institution. He does not have an overly formalistic or normative decision-making process, although he will almost always frame issues from an organizational structure approach and will use organizational actors in their roles to assist in making decisions. The heavy influence of the culture—in this case, research academia—was noted as a constraining anchor.

He describes himself as being more of an intuitive decision-maker, basing decisions more on personal values and beliefs than on quantitative data (despite the financial rationale of restructuring). He doesn't operate with much of a written plan for approaching decisions; nor is there much reference to a plan to evaluate outcomes; This is in contrast to the fact that most of his decision-making energy is spent on developing implementation plans, identifying and collecting information needed for making the decision. The least amount of energy is spent on developing trial balloons or evaluating alternatives.

The Chancellor was reluctant to identify "decision points," choosing to see decisions more as successive events, and that a decision might not actually be called a decision until something is completed. He was relatively uncertain as to how others would view his decision-making process—and relatively unconcerned about that as well. He views his role as moving the institution toward its goals. Although he notes the presence of well defined organizational values, he is quick to add that this doesn't always mean that the institution is moving in the direction that best achieves these values.

Academic restructuring was used as an example of a decision area. The Chancellor saw this primarily as an issue of containing administrative costs. The commitment was made to engage the campus in a year long discussion about structural alternatives and then use the following year to implement an alternative organization structure. A series of open meetings were held, discussions with the chairs of the divisions and formal committees were initiated, and the dialogue seem to be proceeding positively. Just at this point, what appeared to be a consensus of the campus, disintegrated into clear faculty resistance. Faced with the situation, the Chancellor decided to "take the issue off the table, put in (his) back pocket and let it resurface again—the issues will still be there and some of them will have to be addressed anyway—issues may come up in different ways." Clearly his tactic was to adjust the timeline somewhat—but the goal still

remains. "That happens all the time—ideas disintegrate—that's frustrating, especially when commitments are made out there. And things are going well."

The Chancellor's perception of the situation was that no one really got upset about the situation until they thought some action was actually going to be taken. This raises the question as to how decisions are viewed differently by individuals from different vantage points. While faculty members perceived that a decision had been made, the Chancellor perceived that the decision was still out in the future.

Finally, the Chancellor noted that he doesn't spend a lot of time on defining problems; he focuses more on solving problems because they usually "hit you in the face." He had some concerns initially with the notion of audibles—because he was unsure about whether you can actually name clear decision points. But as the discussion progressed, he commented on the value of the concept. Also, he was hesitant to embrace the image because of its potential competitive associations; he does not view his organization as being two teams—offense and defense. This may be a limitation of the metaphor.

Portrait Three: Police Chief. The Police Chief has been in his current position since January, 1996. He was promoted from within the department after serving more than fifteen years in line police work. As a decision-maker, the Chief depends very much on his own personal values and past practices; he relies on what has been successful for him in the past. At times, he is able to see that his own personal values are at odds with those of the department. He is heavily involved in trying to change the culture of the department. He would identify his decision-making strategy as one in which he hopes to cause the least disruption to people (although this seems to be at odds with how others in the department view him). He sees himself as a creative decision-maker.

By self report, he describes himself as more intuitive, tending toward taking the first alternative available, making decisions more himself, viewing decisions more as single events, and not having a written plan for approaching decisions. He makes decisions based on his personal and organizational values, and tends not to evaluate outcomes by reference to a plan. He thinks others would view him as sometimes consistent and sometimes inconsistent, informal, ad hoc, and intuitive.

As an example, we discussed the restructuring of the police department. The driving personal value was to get more officers out doing police work and less time in the department doing paperwork. The catalyst for this decision was a three year state grant providing money for more police officers or civilians. The Chief's strategy to restructure the department is to 1) transfer police officers from administrative positions out into the line and replace them with civilians at less expense, and 2) reconfigure the number of "ranked" positions by either reconstructing the management hierarchy or cutting out a level. This would be done by creating more lower level rank positions and fewer upper level spots. He views the department as being administratively top heavy.

The decision-making process can be seen as one which has had to be altered along the way. In addition to the officers, the Chief has to contend with a civilian Merit Commission and a police officer's union. The focal point was at a Fall, 1997, Merit Commission meeting when the Chief presented the grant proposal and as he says, he "was outnumbered 51-1." The process by which this decision will be implemented has occurred somewhat slower than initially expected. The discussions have been expanded to include the formation of an employee committee and the focus of discussions has been expanded to identify the department's long range objectives.

In retrospect, he might have started by looking at longer range objectives. He sees the changes being proposed as being at odds with past values in the department. The department has not been focused on performance. He also sees officers who do not want to take even simple instructions from civilians, thereby making the introduction of civilians into the department difficult.

His pattern of decision-making could be characterized as being more impulsive, lacking a consistent game plan, and probably willing to alter decision outcomes as much as adjusting tactics, particularly if opposition is strong. This should be viewed in relation to the strength of his personal convictions and his tenacity to hold to a position, if personally important to him. Although relatively unconcerned about the reactions of others, the Chief acknowledges that it might be useful to focus more time on anticipating what the objections to his approaches are or

building ownership on the part of individuals in order to move things forward. Along with this, it should be noted that he tends to consult with people more informally, using key people he trusts as sounding boards, but perhaps bypassing some of the formal organizational structures. The penchant the Chief has for "making decisions" may be influenced by the quasi-military or hierarchical structure of the police organization.

Comparison of Organizational Leaders. Table 1, below, provides a summary of how these three organizational leaders might be characterized along six different dimensions. This table will show both some of the similarities and differences.

Table 1. ***Graphic Illustration of Leaders on Various Dimensions***

Dimension	*Plant Manager*	*Chancellor*	*Police Chief*
Image of Self	Intuitive, Teacher	Intuitive, Pragmatic	Intuitive, Decisive
View of Decisions	Successive Events	Successive Events	Single Events
Decision Addressed	Continual Quality Improvement	Academic Restructuring	Departmental Reorganization
Dominant Strategy	Incremental Behavioral Change	Balancing multiple priorities	Keep pushing toward my decisions
Cultural Change Desired	Increased Individual Accountability and Responsibility	Greater collaboration and Control of Administrative Costs	Greater Performance orientation and more "police work"
Focus of Efforts	Preparing the conditions for acceptance of decisions	Identifying and getting information needed; screening against the mission	Make the decision and let people react; will adapt as needed

Common Themes. Despite their individual differences, four common themes can be identified. First, there was a distinct lack of a formal decision-making model, a point that will be addressed more later. And in two of the cases, little reference back to a plan to evaluate decision outcomes. Second, to a certain degree, each one of the leaders had difficulty identifying specific decision points. In at least two cases, it was as if calling something a "decision" was delayed until the last possible moment. This is not done out of procrastination but may be a leadership skill which acknowledges the ongoing nature of organizational decisions. It may also be done to protect themselves in case a decision goes sour. Third, the role of personal values in organizational decision-making appears to be of great importance—and each organizational leader interviewed seemed to be relatively unconcerned about how their employees viewed them. Fourth, all were engaged with decisions requiring a change in the culture of the organization. But in the decision-making examples, no part of the process dealt explicitly with the decision to change the culture—it was regarded as background information and in most cases viewed as a constraint.

Relating the Data to the Hypotheses. What did we learn in terms of our hypotheses? First, do organizational leaders continually monitor organizational responses to change implementation procedures and make adaptations on the basis of these perceptions? It is clear that organizational leaders are not unaware of how their organizations are responding. On the other hand, the evidence suggests that this hypothesis needs to be altered somewhat. It was not clear that this is an issue to which these leaders attended. There is a realization that projects may get derailed, but the predominant approach to their decision-making is to assume progress until shown signs of clear and strong resistance. While they are attune to their environments, one does not sense a continual monitoring of the organization's response, nor a high level of concern about it.

Second, when adaptations are made, is the rationale for making changes communicated or made visible to organizational participants? It was hypothesized that they would not be. This is also difficult to determine because of the manner in which these leaders perceive decisions. There is little evidence to suggest that organizational leaders make the reasons for their "adaptations" transparent or visible to organizational participants. There are several possible explanations. Since there is often not a fixed decision-making strategy, there may be little distinction between normal progress and adaptations. Only in a routine situation would adaptations be clearly identified as

adaptations. Also, organizational leaders may want to maximize progress toward their personal goals and values. To acknowledge that progress or the process has been adapted may detract from their sense of "leadership competence," even though adaptations are frequently made.

Third, it was hypothesized that when adaptations are made, these would generally be made with regard to change tactics and procedures rather than change outcomes. This hypothesis was clearly supported in two ways. First, all three leaders were focused on goal achievement. Second, in most cases when adaptations were made, they were viewed as a delay in the timetable rather than a change in the goal. There may be an exception here. If decisions are viewed more as discrete, single events (as opposed to smaller successive events), then a leader may be more prone to alter the change outcome itself.

Fourth, does the individual's personal approach to change have a greater influence on decision-making processes than the organization's industry characteristics? Here, the hypothesis must be revised. In each case studied, the current organizational cultures were viewed as a serious constraint on decision-making. The nature of the industry plays a role is shaping these cultural expectations, but it is likely that the *culture of each particular organization* is at least as great an influence as an individual's personal approach to change. There was no direct evidence either confirming or disconfirming any correlation between how leaders deal with change personally and how they deal with it organizationally.

Implications and Further Research

Conceptual Decision Making Models. Models of individual decision-making are evolving. Beach surveys traditional normative decision-making models and outlines a "naturalistic" decision-making model, one which he contends more closely represents what happens in actual decision-making (Beach, 1997, p. 166). The data collected here supports several of Beach's key contentions. First, we may overestimate the use of formal prescriptive or normative decision-making models in real life. When faced with decisions, there does not appear to be a conscious choice about applying a mental model of decision-making. It is also possible that this happens so frequently that it is an "automatic" response which has just not been brought to consciousness.

Second, the data confirms Beach's contention that we have underestimated the role of personal values in decision-making. All three organizational leaders began their decision-making processes with reference to their personal values. Of interest, while viewing their values as being closely aligned with their respective organizations, each could also distinguish between the two, realizing that these might diverge at points.

Third, Beach's model may underestimate external factors. The decision-maker's process itself is shaped by external factors such as changing customer requirements, controlling administrative costs, and the need to deploy personnel differently. Although a leader's personal values and projections are key, external events are the impetus for many decisions.

Finally, even in Beach's naturalistic model, which is more descriptive than normative, it still appears to be a more formal process than actually occurs in reality. Organizational leaders, at least in small to medium size organizations, do not appear to go through the type of compatibility sorting process that Beach has outlined. The model has much to commend itself, but may need continued refinement.

Future Questions. There are a number of questions which this research raises for further research and inquiry: 1) Under what circumstances would organizational leaders benefit from utilizing more formal decision-making models? 2) How do we measure the quality of decisions, and does that quality vary with the decision-making method? 3) Would the effectiveness of organizational leaders be enhanced if adaptations in decision-making processes were made more explicit and discussed more openly? 4) How do we assist organizational leaders to assess the strengths and liabilities of their personal decision-making processes? 5) Does the metaphor of an "audible" needed to be revised or explored further?

Summary

The process of "calling audibles" or "making adaptations" during decision-making processes is seldom articulated on the surface. In most cases, these key points are known in retrospect—or are communicated in very neutral terms. When decisions are made to alter change implementation processes, they are primarily directed at adapting tactics and procedures, not the change outcome itself. The metaphor of the "audible" might be useful to decision-makers because it signals continuity with an ongoing game plan—a priority for leaders. While strategies and plans may be formalized, methods for approaching decisions are more informal. Success in calling audibles may be a critical factor in a leader's ability to help change an organization's culture.

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A Case Study Using a Large Scale Interactive Event to Implement Organizational Change in a Nonprofit Government Organization

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Organizations regularly implement changes. Large Scale Interactive Events (LSIEs) are increasingly used to implement organizational change when large numbers of participants are involved. This case study of a nonprofit government organization explored the planning for the event, the event itself, and the followup activities through observation and extensive interviewing, identifying strengths and weaknesses of such LSIEs. Recommendations for improved implementation are made.

Organizations (for profit and nonprofit alike) have to contend with change which occurs because of the level of technology, globalization of the economy, and changes in demographics (Merriam & Caffarella, 1991; Nutt & Backoff, 1994). Organizations often seek help from organization development (OD) consultants for help in implementing and maintaining change. OD consultants are constantly looking for innovations to cope with change and to implement change efficiently and effectively. Recently, OD consultants have devised new methods of implementing changes which are aimed at shortening the time it takes to effect change by focusing on the entire system rather than on individuals or groups of individuals. As observed by Bunker and Alban (1992b):

> In organization development (OD) practice we have been impressed and excited by what appears to be a new type of social innovation occurring all around us. We are speaking of several different types of work with whole systems that is (sic.) emerging in a variety of forms. (p. 473)

One way of implementing change in the whole system is through the use of LSIEs (LSIEs). These events are attended by as many as 1,500 people (Sullivan, 1997), all meeting in one place for a two- to three-day period. In such an event, participation is extended to all possible stakeholders, such as employees, shareholders, customers, and suppliers.

Background of the Study

LSIEs, in which the whole system is targeted for the implementation of change, appear to have begun with the work of Emery and Trist in Britain in the late 1950s and early 1960s (Purser, Cabana, Emery, & Emery, 1997). They referred to their work as Search Conferences. Before then, OD interventions had targeted individuals or departments, and the implementation of change was gradual. The development of LSIEs was slow in the 1960s, but from the 1970s the growth in the use of LSIEs has been phenomenal (Bunker & Alban, 1992b). This change has been evidenced by the increasing number of OD consultants using LSIEs.

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Purposes of the Study

As with all organizations, nonprofit government organizations find themselves having to cope with rapid changes. These changes may result from new regulations, dwindling sources of funding, or political crisis. Menefee (1997) concluded that

> Over the next decade, these economic, political, social, and technological forces will have profound impact on size, structure, and function of the nonprofit human service industry. (p. 12)

The purposes of the study are to determine the strengths and weaknesses of an LSIE in planning and implementing change in a nonprofit government organization, to explore the experiences of the participants of an LSIE, to evaluate the LSIE as seen by the participants, and to establish what the participants think would make the LSIE more effective in implementing change.

Need for the Study

There has been a great deal of activity in using LSIEs in the public and private sectors (Nutt & Backoff, 1994; Purser, Cabana, Emery, & Emery, 1997; Sullivan, 1997). Bunker and Alban (1992b) alluded to OD practice being atheoretical today and called for interaction between theory and practice. Research should be conducted to address that imbalance where practice is not supported by theory. Writing on LSIEs to date has largely been by the OD consultants who are using the events to implement change. Their assertions on the success of the events need to be supported or rebuked by independent research. There is a need for this study to report purposely and as objectively as possible by third party researchers on the efficacy of LSIEs.

It is also worthwhile to understand the potential of LSIEs for nonprofit government organizations. While nonprofit government organizations operate under a different set of conditions from profit-oriented organizations, nonprofit government organizations are increasingly operating more like profit-oriented organizations.

Significance of the Study

Organizational change is very common as evidenced by the large number of OD consultants who devote their energies to the planning and implementation of change. Organizations are themselves systems, yet they are built on individuals--individual chief executive officer, individual manager, individual employee, individual shareholder, and so forth. Thus, it is important to study organizational change as a whole, while also exploring the experiences of individuals experiencing change in that organization.

Much of the writing on LSIEs originates from reports of what happens during the event. While this is important, there is no adequate report on the planning for the event, the feelings of participants about the event, the changes that follow the event, or what happens much later after the event. This study will explore the planning that took place before the event, the interactions during the event, and the personal feelings a few days after the event. A subsequent study will explore participant reactions six months after the event.

Specific Research Questions

The central question for this research was formulated around organizational change and how an LSIE would influence that change. In a meeting held during the planning stages of this research between the researchers and a group of OD consultants involved in LSIEs, the following specific research questions were identified:

a. What happens before, during, and after an LSIE?

b. What purposes would an LSIE have for a nonprofit government organization?

c. Are the purposes of an LSIE achieved?

d. What is it like for employees of a nonprofit government organization to participate in an LSIE?

e. What does an LSIE contribute to an overall change effort in a nonprofit government organization?

f. What role does the leadership of an organization play in an LSIE?

g. What variables impact the success of an LSIE in a nonprofit government organization?

Limitations of the Study

This case study involved participants from the same LSIE. Their experiences could well be very different from experiences in other LSIEs and in other organizations.

Literature Review

There has been a recent influx of LSIEs aimed at working with a whole organization to reduce the time it takes to institute change. Such interventions use various names: Search Conference, Future Search, Multisearch, Future Search Conference, Conference Model, Simu-Real, Open Space Technology, Appreciative Inquiry, Work Out, Fishbowl, Real Time Strategic Change, Large Scale Interactive Events (Brigham, 1996; Klein, 1992; Purser, Cabana, Emery & Emery, 1997; Sorensen, Gironda, Head & Larsen, 1996; Weisbord & Janoff, 1995). While there is variation in the primary strategy utilized, what is common is the involvement of large groups of people meeting in one place for a period of two or three days.

LSIEs are based on the principles of small groups (Dannemiller & Jacobs, 1992; Emery, 1992), though the number of people in the groups could be very large, ranging from as few as forty to over two thousand persons, all meeting in one place in short periods of time (two to three days). In fact, a group involving less than one hundred can hardly qualify as a LSIE.

A second characteristic is that LSIEs target the whole system as opposed to dealing with a single department or a group of persons (Bunker & Alban, 1992b). Therefore, each small group in a LSIE is usually made up of persons from different departments and levels. This is referred to as max-mix in the jargon of LSIEs (Sorenson, 1996).

Third, LSIEs are democratic (Emery, 1992; Sorenson, Gironda, Head, & Larsen, 1996). Each person is given an opportunity to air her or his opinions. It is important that democracy be practiced in order to increase the active participation of all participants. However, it is unlikely that the short time of the event will allow for a truly democratic atmosphere.

A fourth characteristic is increased commitment to change (Axelrod, 1992). If a person is a party to a decision, she or he is likely to be more committed to that decision.

Another stated characteristic is that LSIEs have greater speeds of implementing change (Axelrod, 1992). Because LSIEs involve all parties affected by the change, commitment is achieved quickly, thereby reducing the time it takes to implement changes.

A sixth characteristic is the development of working relationships that go beyond departments. As persons interact, they develop working relationships that would not have been possible without the LSIE (Bunker & Alban, 1992a).

Finally, LSIEs are interactive in nature (Dannemiller & Jacobs, 1992). These interventions are designed to allow interaction among persons of different departments and

levels in an organization. Other characteristics include consensus, collaboration, and shared ownership of decisions.

There is, however, no agreement about the minimum or maximum number of participants (Dannemiller & Jacobs, 1992; Gilmore & Barnett, 1992; Purser, Cabana, Emery, & Emery, 1997; Sullivan, 1997). Some OD consultants utilizing this strategy suggest a minimum of 100 and others mention 300. There appears to be no claims as to maximum number of participants.

Purser, Cabana, Emery, and Emery (1997) have expressed their concerns about the number of participants:

> We suspect that these large group events might be useful for enhancing information sharing across boundaries, but we would be hard pressed to believe that the quality, depth of dialogue, and solidity of joint agreements around long-term purposes could be equivalent to a group of 35-40 participants which is the upper limit in a Search Conference. (p. 48)

While the authors are advocating for search conferences, it is easy to be sympathetic with their position. The large numbers of people and the compressed time for deliberations raise concerns for us as well. Might an LSIE turn out to be like a political rally rather than an effective tool for change? Emery (1992), commenting on LSIEs, wrote:

> All this is predicated on early and thorough planning and design that again involves understanding of the genotypical design principles. Until this understanding becomes widespread through cooperative work, management committees will continue to design camels instead of race horses. (p. 533)

Emery was referring to management committees which institute fast changes in organizations using LSIEs. Research around LSIEs is needed to confirm or allay the concerns raised about them.

Another concern related to LSIEs is the possibility of the occurrence of the "illusion of participation" dilemma (DeVogel, Sullivan, McLean, & Rothwell, 1995). An illusion of participation may be created when decisions are not actually made at the event but at another venue by different persons. It is possible that participants will not chart any change but may be used to "rubber stamp" decisions reached by a handful of individuals (say, top management). Bunker and Alban (1992a), for example, observed:

> The large group event is primarily an interactive planning event. When it comes time to make decisions, those with responsibility in the organization must take their decision-making roles again even if that simply means blessing what has already been done. (p. 585)

However, the decision-maker may decline to implement decisions reached in an LSIE.

In the development of Kenya's national language, Swahili, there is an unwritten policy of liberally accepting new words from different languages. A similar situation exists in the field of OD. As long as practicing OD consultants continue to develop different intervention strategies, researchers will have to study the interventions (LSIE in this case) to add theory to improve practice. Knowledge about LSIEs has the potential of enriching OD theory and practice.

Research Methodology

This study utilized phenomenological research. Van Manen (1990) stated that "phenomenology must describe what is given to us in immediate experience without being obstructed by preconceptions and theoretical notions" (p. 184). This research was designed to give accounts of persons who participated in an LSIE in preparation for organizational change. Streb (1984)

identified three stages in phenomenological study: making judgments, asserting the judgment made, and thinking about empirical categories. This study developed a description of the experiences and reflections of the participants and leadership of an LSIE.

Research Design

The research was a case study of one nonprofit government organization headquartered in St. Paul, Minnesota. The study largely used participant observations of an LSIE, followed by interviews of participants and leadership soon after the event. A subsequent study will also interview participants and leadership six months after the event to solicit evaluations of the accomplishments about the LSIE and to describe the contributions the event made to the way changes were implemented in the organization. Observations were made of the planning meetings for the LSIE. An observation guide was developed for use during the event. The observations were used to write a description of the interactions during the event.

Interviews were also held during the month after the LSIE. These interviews captured the participants' perceptions of and feelings about the event. The participants will also be interviewed after a period of six months. The purpose of both sets of interviews is to solicit evaluations of the accomplishments of the LSIE. The participants were asked to describe the contributions the event is likely to make in the way changes will be implemented in the organization. The six-month interviews will determined the actual impact of the LSIE on the way in which changes were implemented.

Before the researchers became involved, an earlier meeting had been held between the Executive Team and the managers. This meeting made the decision to hold an LSIE for the entire organization. It also decided that the event would be planned by a representative group of persons from the entire organization. This group was referred to as the Design Team. The Design Team was made up of nine persons who volunteered to participate after receiving electronic mail from a member of the Executive Team. The members of the team were largely unknown to each other. Only one person was from the support staff, and only one person had attended the earlier meeting of the Executive Team. Two OD consultants were also on the Design Team. Neither of the researchers had any responsibility for nor any role in the activities, except for as non-compensated research role.

Observations were first made of a three-day planning meeting of the Design Team. Another observation was made of the staging day--a day before the actual LSIE. Staging the event was done by the two OD consultants, the Design Team, and the Support Team. The Support Team consisted of two office staff from the consultants' organization, support staff from the client organization, and volunteers who were learning how to conduct LSIEs. Finally, observations were made of the entire three-day LSIE. The event included 468 people from a nonprofit government organization with 534 employees and the OD consultants. Attendance at the event was "required," not voluntary.

One-hour interviews were held with 22 people within a month after the LSIE. For the interview part of the research, selection was made to include women, minorities, and employees at all levels of the organization. While an interview guide was developed, the interviews were largely unstructured, with the participants being allowed to make uninterrupted responses followed by probing questions for clarity or expansion. The researchers also reviewed the records made during the event.

Instrumentation and Validation The study was designed from an interpretive perspective. Its validity is built on agreement between the researchers and the participants on the themes emerging from the discussions. A summary of research outcomes was shared with the consultants and the participants from the nonprofit government organization for their feedback.

Data Analysis A report of all observations was first written. Then, all tape-recorded interviews were transcribed and hard copies made. A thematic analysis was made from the interviews and observations of the LSIE. Dominant themes were identified, summarized, fed back to participants, and then revised, as needed.

Observations

Observations are based on the meetings of the Design Team and the three-day LSIE.

Design Team The planning for the event was done by a nine-member Design Team and two OD consultants. The OD consultants explained the purpose of LSIEs as shortening the length of time it takes to implement change. The consultants explained that the Design Team will plan for the event and will perform some of the activities during the event.

The Design Team went through the activities that were to be done during the LSIE. One of the activities was to determine what was working for the organization and what was not working. The representative of the Executive Team provided information on what the Executive Team hoped to achieve during the event. The Executive Team is made up of the Commissioner, the deputy commissioner, three assistant commissioners, and three other persons.

The Design Team identified those activities that would be carried out during the event to enable the organization to change. The OD consultants present were careful not to provide solutions for the organization. The consultants served only as resource persons in that they only made suggestions and left the Design Team to struggle with what they wanted for the organization. The members also undertook to do specific tasks before and during the event.

LSIE The LSIE lasted three days with 468 persons in attendance for at least part of the time. At no time was there a table with fewer than six persons, with some tables having seven or eight. The members of the Design Team were present throughout the event period and took active roles in the event.

Free Interaction. Each day of the event consisted of free interaction of participants over continental breakfasts, coffee breaks, and lunches. The participants further interacted in their max-mix tables. The composition of these tables was such that each table had all categories of employees--management, supervisors, professional staff, and support staff.

Objectives of the Event. One member of the Design Team read the objectives of the LSIE. The objectives were:

1. To determine what is working and not working in the organization.
2. To understand and embrace the new agency's purpose, mission, and goals.
3. To identify the opportunity that exists for each individual's unique contribution to the purpose and goals of the organization.
4. To commit to a community culture focused on services to their customers.
5. To identify and take the first steps needed to implement fully their new culture.
6. To identify a method of measuring and communicating their results.

She pointed out that there are things beyond the control of the participants, for example, the vision and mission statement. In summary, the event was to create and define culture, build community(s) (internal and external), and identify solutions to ensure that the organization will accomplish its mission.

Speeches. There were short speeches throughout the three-day event. These included a "power speech" by the Commissioner of the agency, a State Senator, a panel of community stakeholders, the Design Team members, and the OD consultants. Most of the speeches were followed by reactions from the participants. Some speeches were followed by lengthy interaction through question and answer sessions and discussions at the max-mix tables. Each speech was geared towards the need to see the agency as one "whole" organization with a mission to serve community(s) rather than several "parts" of a disjointed organization.

Activities. The participants were involved in many activities during the three-day period. The activities included the identification of what was working and not working at the agency, writing culture statements, rewriting the culture statements, and drawing system-wide action plans. Another activity was for the participants to react to the speeches which were given and report on the table discussions. The participants also wrote personal commitment statements. From time to time, the participants were engaged in fun breaks--activities meant for fun only.

The Product. At the end of the third day, participants had written statements of their culture, systems-wide action plans, their commitment to the organization, and what they planned to change in the way they work. These were, however, very general statements about the

organization; they could have fit many other organizations. The final version of the statements was sent to a follow-up committee for additional work. The committee was made up of volunteers.

Interviews

In the second phase of this study, 22 participants of the LSIE were interviewed. An interview was also held with one of the OD consultants, and another consultant gave written responses to the interview questions. The interviews were meant to document the experiences and feelings of the participants during the event and their expectations of how it will affect the operations of the organization. The interviews produced insights into what could not be observed or read in the records.

The interviews revealed that the participants were concerned with the slow pace of the follow-up activities, that the level of expectations was high, and that the research participants and the organization as a whole had not changed much as a result of the event. The participants were convinced that the Executive Team was genuine with its concern for change, but they felt that the life of the Executive Team was dependent on state politics. They also looked to the Executive Team to implement the changes. The high number of volunteers for follow-up activities showed the participants' desire to be involved in the change process. However, the slow pace of implementation kept the level of skepticism high even after the event.

The OD consultants and the client organization perceived the consultants' roles differently. The client organization did expect that the consultants would participate more in the follow-up activities and develop a consulting product (documentation and analysis). Another incongruency occurred around a specific activity during the event--the fun breaks. While the participants received them well, they caused problems for the consultants as they consumed a lot of valuable time without really moving the process forward. As a nonprofit government organization, there did not exist a full-fledged OD department and that delayed the data analysis and other follow-up activities. However, the organization had hired a person to coordinate the followup activities.

Conclusion

The LSIE prepared ground on which organizational change could be implemented. The use of an LSIE to implement organizational change in a nonprofit government organization created great expectations for change in the participants. The LSIE, to date, has resulted in minimal change in the way individuals and the organization operate. The event is indeed a beginning for change rather than an end in the implementation of organizational change.

OD consultants planning on using LSIEs should plan on spending more time on the implementation phase rather than assuming that change is achieved during the event. In a nonprofit government organization, it is likely that there will not be an internal OD department, and so an external OD consultant should plan on spending time to help in follow-up activities. Planning for follow-up activities is as important as planning for the LSIE itself. OD consultants should anticipate what problems nonprofit government organizations may encounter and coach the leaders accordingly.

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Organizational Memory and Scripts: Sources of Resistance to Change or Sources of Lessons from the Past?

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Based on a qualitative study that elicited and mapped the dominant mental models and sensemaking patterns of organization members during a reengineering project, this paper explores the powerful role played by organizational memory and collective-level scripts in guiding the thoughts and actions of organization members. Implications for planned change interventions are discussed.

This paper is based on a year-long case study of a major reengineering project in a civilian federal agency, referred to here as DAA. The purpose of the DAA study was first, to describe the collective-level schemas (shared mental models) and collective-level sensemaking patterns that emerged in a planned change intervention. Second, the study identified those activities related to the change that most influenced these cognitive phenomena.

Schemas are thought to play an important role in organizational change because they embody the assumptions and expectations of organization members and have an observable impact on how organization members think and behave (Bartunek, 1984). Also referred to as mental models (Senge, 1990) or knowledge structures (Walsh, 1995), collective-level schemas are representations of an organization's knowledge of some domain of interest. Cognitive anthropologists see complex and intricate patterns of schemas as the basic building blocks of cultural groups (D'Andrade, 1992). *Sensemaking* refers to the processes organization members use to construct meaningful explanations for their experiences; it includes the interpretation of incoming stimuli and the creation and modification of schemas that represent the environment (Weick, 1995).

Schema change has been associated with individual development (Piaget, 1985), organization-level learning (Kim, 1993; Schwandt, 1995; Senge, 1990), and radical or second-order organizational change (Levy, 1986). Because reengineering is, at present, a popular methodology for planning and implementing radical change in organizations, it provides a useful context for a study of schemas and sensemaking patterns elicited during organizational change.

Previous sociocognitive studies during change initiatives (e.g., Bartunek, 1984; Gioia & Chittipeddi, 1991) focused primarily on the role of leaders as sources and legitimizers of alternative schemas. In contrast, the DAA study focused on the schemas and sensemaking activities of the *work group*, the people in the organization who were outside the formal decisionmaking group. In most change initiatives, work group members have no formal role in conceiving the change but are critical to the successful implementation of plans conceived by the *design group* (in this case, the reengineering team and decisionmakers). Indeed, it has been suggested by scholars and practitioners alike that the enactment of organizational change depends largely on changes in the cognitive structures and processes of work group members. Note, for example, the following explanation for the frequency of reengineering project failures:

> It isn't especially arduous to come up with breakthrough ideas... [The real problem] is...getting people to let go of their old ways and embrace new ones... When a process changes,... more than jobs and skill requirements change. People's styles -- the way in which they think and behave -- and their attitudes -- what they believe is important about their work -- must also be realigned. (Hammer & Stanton, 1995, p. 17)

This paper explores what most influences how work group members "think and behave" in the phase of the change process Kurt Lewin called "unfreezing" (Schein, 1987). It thus contributes to our understanding of what occurs when an organization readies itself for radical change. It describes the methods used in the DAA study to identify collective-level schemas, the origins, content, development, and function of those schemas, and how new stimuli influenced ongoing sensemaking patterns in the work group. It concludes with a discussion of the implications of these findings for planned change interventions.

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Methods

The primary source of data on collective-level schemas and sensemaking was a series of focus group interviews. Focus groups allowed me to collect data from a larger number of work group members than would have been feasible otherwise and provided a setting that could generate data and ideas that might never be uncovered using methods that collect individual-level data (Stewart & Shamdasani, 1990). Focus group interviews are well-suited to exploring collective-level cognitive phenomena; they provide a setting where "instances evoked by one member trigger memories in another member's mind -- and the integration into a single judgment is performed by the group" (Schneider and Angelmar, 1993, p. 360).

Following a structured methodology developed by Billson (1996), I constructed a blueprint for the focus group phase of the study that guided my purposeful selection of participants. Each group was homogeneous on the key variable of *degree of direct experience with the project,* an interesting and somewhat unexpected variable that had emerged from observations during my first eight months in the field. The groups were deliberately mixed along less critical variables, like hierarchical level and unit affiliation. I used the organization's internal e-mail system to issue invitations and collect responses. Of the 89 work group members who were invited to focus groups, 57 took part (64%). Representation in the focus groups mapped closely to the actual population of the agency on unit affiliation and gender dimensions.

The focus group protocol was designed to elicit work group schemas in the following way. First, work group members were primed to think about reorganizing by briefly describing what they recalled from past reorganizing experiences. I then invited them to compare and contrast the past and present experiences; this produced a meaningful description of their current experiences in reengineering. This approach is based on the idea that the content of schemas can be found in the summaries of past experience, the "cues and labels that snare specifics of present experience, and in the ways these two settings are connected" (Weick, 1995, p. 111). It is grounded in a basic tenet of personal construct theory, which holds that "man makes sense of his world through contrast and similarity" (Kelly, 1955, p. 3).

I conducted eight two-hour focus group interviews over a three-week period in July 1996, two months after the final report of the reengineering committee was issued, and before decisions on implementation had been made. I audiotaped the focus group interviews and transcribed verbatim all of the tapes myself. This allowed me to "revisit" each focus group when I had no group facilitation responsibilities and could give the content of the conversations my undivided attention. It also allowed me to document the emotional tone of the discussions.

Data Analysis and Validation Analysis of verbatim transcripts revealed not only the story of the reengineering project but also stories of two past reorganizing events that were used in every focus group to draw comparisons with the present. The first stage of analysis, therefore, required that I reconstruct these three stories -- two past and one present -- retaining as much of the participants' language as possible. Next, the organizational stories were analyzed as text, searching for embedded actions, descriptive data about those actions, and linkages that revealed the sequence of the actions. This produced an outline of the work group's shared knowledge of these reorganizations that distilled and sequenced the actions and outcomes associated with each event. These distillations of the stories are known as *scripts,* which are schemas devoted to the retention of context-specific knowledge of events (Abelson, 1981; Gioia, 1986; Gioia & Poole, 1984). The last phase of analysis compared the scripts from these three events to discover how work group schemas about reorganizing developed over time. Also, sensemaking patterns and the effects of new stimuli were identified.

About six months after the eight focus groups met, I invited one participant from each of the eight focus groups to a ninth focus group interview. The purpose of this interview was to present the initial results of my analysis and ask participants to discuss, debate, and validate my findings. Their suggestions were incorporated into the final report of the study.

Results of Analysis

In all eight focus groups, participants told stories of the same two events that had occurred years earlier when asked to describe their impressions of reorganizing. While the memories were often vivid and detailed, they were not exact records of the actual events. Instead, some information

from these experiences was retained and other information was left out, producing a simplified version of the experience -- a script -- that could be stored and retrieved for later use. It is this distilled collective-level cognitive structure that organized and facilitated retrieval of memories. These findings are consistent with research showing the role of schemas in human memory systems (Bartlett, 1932) and the role of communication and storytelling in reconstructing, transmitting, enhancing, and changing memories and scripts (Martin, 1982; Schacter, 1996).

Past Reorganizations -- 1981 and 1991 The first major reorganization in the agency's history occurred in 1981. Known as *"the Reagan RIF,"* it produced a 40% reduction-in-force at DAA. *"I was involved in the 1981 RIF. But whether you were involved or not, it created very bad feelings. And it lingers fifteen years later. That's how strong it was."* *"That is certainly true. This place was like a morgue for [the following] five years. People did not smile. There was slow step. You'd go to meetings and they dragged. It was depressing."* In other groups, participants observed that *"People are still carrying the psychic, emotional, and financial impacts of the 1981 RIF with them."* Focus group participants not working at DAA in 1981 also knew about the RIF. *"Ever since I have been here, people have talked about it."*

The strongest memory of the 1981 RIF was its secrecy. *"Management played that RIF very close to the vest."* Whole classes of positions were targeted for cuts, which meant that people in some job categories were especially vulnerable. *"A great deal of time was spent by people trying to figure out what was going to happen -- where they might end up in this process."* According to the story, top managers running the RIF began changing people's job descriptions behind the scenes in order to protect "*their buddies*" from impending cuts. Work group members condemned this practice as blatant favoritism and viewed the secrecy as a cover for decisionmakers who were manipulating the system.

The second major reorganization occurred in 1991. Its purpose was to create a new business unit that would support a new policy initiative by centralizing previously decentralized functions. In this case, no one lost his/her job but about a fourth of the agency's employees were moved to the new unit. Although the purposes and outcomes of the 1981 and 1991 reorganizations seemed quite different to me (downsizing vs. centralization; job losses vs. staff reassignments), the similarities in the memories and emotions recalled were striking. For example, the 1991 reorganization was described as *"wrenching... because the information about what was going to happen was held very tightly. I knew who I would be working for a day before I was assigned to that organization."* Like 1981, senior managers made all the decisions "*behind closed doors.*" Employees whose functions were "*targeted*" for the new unit "*felt they had no control over their life and no value either.*" Being sent to the new unit was compared to "*being sent to Siberia*"..."*like being ripped out of your home.*" Anxiety, secrecy, top-down decisionmaking, the practice of targeting some and protecting others were strong themes in both the 1981 and 1991 stories. In fact, the only difference noted between the two reorganizations was that the secret planning period was significantly shorter in 1991 than in 1981.

Present Reorganizing Efforts -- The 1996 Reengineering Project When asked to compare the current reengineering project to past reorganizations, most focus groups saw reengineering as far more similar than different. The following examples of comparisons drawn between the past and present illustrate this pattern.

Secrecy vs. openness. The first difference noted in every focus group between reengineering and past reorganizing efforts was the openness of the reengineering project. This was attributed to the greatly-increased flow of information on the project. *"It's unarguably true that [the reengineering team] got more information out in the decisionmaking process. The [electronic] bulletin boards, the feedback loops -- all of that was clearly positive."* *"It's different because special efforts are made by [the reengineering team] to brief people, to inform people about what's happening."* Although this dramatic and purposeful change in how information flow was handled drew almost uniform praise, almost half the comments about communication made in focus groups were about information overload. *"Not only is there more information, but [now] you cannot avoid the information. [laughing] People feel like they know more than they can handle sometimes. They can't absorb all of it."* Work group members complained that it was too time-consuming to keep up and too difficult to identify what was important. *"I didn't even read the [final report]. It was just too long... It could have in it that I'm going to lose my job next week*

and I would not know!" "It's almost as if they are trying to bury you in so much paper [that] they know you won't read it."

In short, although the information blackout that characterized previous reorganizing efforts was replaced by a flood of information, most work group members still felt very much in the dark about what was really happening. Only two focus groups (consisting of work group members who had served as occasional guest panelists on the reengineering team) understood the project well enough to find the information available helpful and to perceive real differences between reengineering and past change efforts.

Top-down vs. participative decisionmaking. One obvious difference was that the reengineering project was the first major reorganizing effort in DAA history to use a team drawn from across the middle girth of the organization to develop recommendations for the change. Team members assumed responsibility for keeping their constituents in the work group informed throughout the planning phase using the electronic bulletin board, staff meetings, informal brown bag lunches, and even one-on-one discussions. In these forums, work group members could express their views of the reengineering proposals as they were developing, an unprecedented change from the past.

While these opportunities to comment helped the project earn its reputation for openness, they had little effect on work group perceptions about how decisions were being made. *"One thing I've seen that is characteristic of the past is that we have gone back to the same small group of people making all the decisions."* In six of the eight focus groups, participants agreed that reorganizing decisions were not emerging from reengineering, but were predetermined by a small group of decisionmakers based on what one participant called *"a master plan." "The decisions have either been made or are going to be made by people who, from the beginning, were going to make the decisions."*

The reengineering team's efforts to encourage work group participation were often labeled *"a facade." "Initially, I thought they were doing a good job of coming back and giving us summaries and they wanted a reaction from us. But, it became obvious later that we were just a sounding board. They just wanted to get a feel for how people would respond to the way they were going and indeed were more concerned with pushing their own ideas."* Participants found that comments from the work group that did not go *"along with the agenda"* were largely ignored, which produced a perception that dissenting opinions were unwelcome. Over time, this discouraged participation. *"About halfway through the process, I felt that it didn't really matter what I did or said. My opinions were going to be overridden if the [reengineering team] didn't agree with me...That's where I came out."*

Targeting some and protecting others. There were several decisions and events that occurred during reengineering that work group members interpreted as a target/protect routine, a prominent action pattern in the 1981 and 1991 stories. Target/protect routines in past reorganizations determined who would stay and who would go; descriptions of these activities were often highly emotional. Actions during reengineering that were interpreted as similar to the target/protect routine produced similarly emotional responses. One example was the "project scope" decision, which determined which organizational functions would be reengineered and which would be excluded from the project. At first, work group members whose functions were out of scope seemed relieved to be protected from the likely disruption of reengineering. But several months later, when the normal budget review process produced an unusual cut in an out-of-scope function, people affected became worried that the project scope decision was a thinly-veiled message about what was important to the agency and what was expendable. They started to *"feel truly left out," "not part of DAA anymore."* Many people, including managers, expressed concern that *"out-of-scope functions are being set up to be cut off."*

Comparative Analysis of the Data The 1981 and 1991 reorganizations had the same sequence of actions, the same players, the same plot line, the same dire outcomes (people being moved where they did not want to be against their will) and similar emotional intensity. When the 1996 script was compared to the earlier scripts, striking similarities among all three emerged, suggesting the strong influence of memories of earlier reorganizations on work group thinking during reengineering. However, some interesting differences emerged between the sensemaking patterns of focus group participants who had some firsthand experience on the reengineering project and the sensemaking patterns of focus group participants who had learned what they knew

about reengineering only through what they had been told. These differences suggested that direct exposure to and involvement in reengineering was more likely to generate new sensemaking patterns than communication alone.

Conclusions

DAA work group members share a well-anchored script about reorganizing derived from and reinforced by past reorganizing events. *Simply put, this script dominated work group sensemaking about change during the reengineering project.* The 1981 RIF probably became the prototype for reorganizing at DAA. In later reorganizations, when new situations were perceived as sharing some common elements with the 1981 experience, a comparison-to-prototype process cued the use of the 1981 script as a basis for responding to the current situation. This use of the 1981 script to make sense of and guide behavior in similar but not identical situations is typical of how prototypes are used to make inferences (Fiske & Taylor, 1991).

Script-Driven Information Processing The reorganizing script served as a lens through which organization members viewed their experiences during reengineering, functioning as a kind of template of expected actions, highlighting where current experiences fit or did not fit. When an experience in the present fit the script, it was rendered sensible and the relevant script elements were reinforced. Piaget (1985) refers to this cognitive process as *assimilation*, an efficient form of information processing that produces little if any cognitive change. Such script-driven information processing seemed to help employees cope with a confusing, information-rich, and uncertain environment. It allowed them to create plausible interpretations of events and make rapid inferences about their likely outcomes. Unfortunately, script-driven processing also has been shown to support confirmation bias (the tendency to see only what you expect to see), which can easily produce perceptual errors (Fiske & Taylor, 1991). For example, the conclusion that efforts to involve work group members were mere pretense and the conclusion that the project scope decision revealed what was going to be targeted for cuts were both script-driven interpretations of ambiguous or novel situations during reengineering. These script-based interpretations, while questionable from my perspective, provided for work group members a plausible account of what was happening, which reduced their anxiety. Unfortunately, these accounts also may have discouraged a search for more satisfactory or meaningful explanations.

The Role of Emotions. The intense emotions associated with reorganizing experiences at DAA, both in the past and present, probably encouraged the script-driven information processing found in this study. Research on the relationship between stress and memory has shown that adrenaline released in the bloodstream during stressful situations enhances long-term memory retention. Researchers hypothesize that intense emotions and the chemicals they release in the blood signal that the triggering events are important and worth remembering (Singer, Chedd, & Angier, 1997). DAA's past reorganizations were emotional and anxiety-producing events, signaling their importance and enhancing retention of corresponding memories.

Heightened emotional states in the present also may have encouraged the script-driven processing found in the study. Research on autonomic arousal in high-pressure/crisis situations shows that experienced stress can suppress recent learning and trigger regression to first-learned behaviors (Weick, 1990, 1993). DAA employees were under great stress during the fieldwork for this study due to anticipated RIFs, a threatened government shut-down, and a general sense of anxiety about the agency's future. These circumstances may have limited their ability to use more recent learning and encouraged them to rely more on their earliest-learned script.

Challenging and Changing the Script The DAA case offers only one example of a real revision of the reorganizing script, what Piaget (1985) refers to as *accommodation* of the schema. This amendment of the reorganizing script was triggered by the unprecedented and dramatic change in how information was disseminated (from complete secrecy to openness). More subtle differences between were the past and present were assimilated into the old script, but this new stimulus triggered a cognitive change primarily because work group members *could not help noticing it.* (Even though information overload generated negative comments, it helped keep the attention of work group members focused on this difference.) Also, information dissemination really mattered to work group members. Being kept in the dark was one of the strongest negative

memories of past reorganizations. The openness of reengineering, despite its problems with information overload, signaled to work group members that those in charge of reengineering understood the lessons of the past and were deliberately doing things differently this time.

However, developing new elements in the script that accommodate this novel stimulus was a demanding sensemaking task -- far more difficult than matching and explaining more familiar experiences using the old script. It demanded not only that work group members let go of their existing assumptions about information flow during change but also required that they develop a collective understanding of these new experiences, including their causes and expected outcomes. Development of new elements in the script, or *accommodation* of the script, was greatly facilitated by firsthand experience with the project. Communicating about reengineering, while necessary, had little effect on work group members' cognitive processes (except to reinforce the old script).

The influence of direct experience on cognitive processes could be seen in the differences in the sensemaking patterns across the focus groups. Focus group participants who had the greatest amount of direct experience with the project showed little of the dominant script-driven sensemaking pattern. These were work group members who served as guest panelists on the reengineering team on one or more occasions or who observed some of the planning sessions firsthand -- people who had seen for themselves how things could be different. One participant called it *"entering a different reality."* Experience was a richer source of data than communications alone; it provided both a strong disconfirmation of the old script and the necessary raw material for development of new script elements. Work group members' direct involvement in the project, even when it was limited to only a few days' work, seemed to produce a more better understanding of the project and its proposals, a finding consistent with a recent study on the effects of participation on cognitive complexity and assessment of change (Bartunek, Davidson, Greenberg, & Humphries, 1996).

Implications for Planned Change Interventions

The DAA study showed that scripts, invisible cognitive structures created through sensemaking about events in the past, have a good deal more to do with how people think and behave during change than anything else *and* that work group members are largely unaware of their powerful effects. The study also showed that reorganizing scripts can be surfaced, mapped, and examined by work group members with the help of a facilitator and suggests what insights can be gained from such an endeavor.

Reorganizing scripts are important sources of intelligence for those involved in planned change interventions because they reveal what organization members noticed and judged as important in the past, providing a clue to what really matters in the present. They provide a window into people's expectations, assumptions, biases, emotions, and knowledge about change. Viewed in this way, they can be seen as the source of important lessons for work group members and change agents who must plan and implement change.

From the work group's perspective, the value of the script may lie in the learning that can result from telling the stories and mapping the mental models that dominate the work group's thinking. Surfacing and mapping scripts makes unconscious patterns of thinking accessible to examination and challenge. This is one of the explicit objectives of various techniques that have been developed to facilitate organizational learning (Senge, 1990). From the change agent's perspective, the greatest value of the script may be its potential to describe in a meaningful way "where the client is." Scripts are especially useful images of an organization because all the unimportant details have been left out. They provide is a kind of historical map that directs one's attention to the most important and most dangerous parts of the landscape.

Despite the powerful cognitive effects of scripts and despite espoused values about "meeting clients where they are," few planned change interventions begin with a systematic inquiry into the organization's memories of past reorganizations. Perhaps our distinctively-American focus on creating a new future suppresses our interest in learning the lessons of the past. Perhaps probing into an organization's past seems too risky because it may open old wounds. This is a risk that must be taken, I submit, because to remain in the dark about the legacy of past reorganizing and fail to take its effects into account in planning a change intervention presents an even greater risk.

The Cognitive Dos and Don'ts *Don't* tell organization members (either explicitly or implicitly) to leave their collective past behind; this does little to help them actually do it and it may not even be possible or desirable. It merely sends a message that their past experiences are undiscussable, which may bury useful lessons. Scripts are most believable precisely because they are based on real-life experiences, a more reliable and powerful source of learning than anything change agents say. Actions do indeed speak louder than words. Because they are distillations of past actions and sensemaking about those actions, they have the privileged status of time-tested guides for behavior. They may go underground but they will not go away.

Therefore, if changing the way people think and behave during change is critical to the organization's success, *do* provide direct, preferably intense, experiences that will disconfirm the assumptions and patterns of the script. This study found that *only* such direct, fully-engaged, rich-with-stimuli experiences were powerful enough to write over the scripts that were created from and reinforced by past experiences. It is unlikely that we can erase past change experiences but it looks like we *can* record over them with new, equally powerful, positive (one hopes) change experiences. I view this as the cognitive microprocess that underpins successful participative change strategies.

Finally, *do* your best to reduce anxiety during the change. (Discovering what created the most anxiety in the past and, if possible, doing the opposite might be a good place to start.) People experiencing heightened levels of anxiety (a state of mind commonly reported during a radical organizational change) are less able to think complexly, integrate new information effectively, and use more recent learning. This is a considerable problem for organizations experiencing change because complex thinking, new ideas, and an ability to see one's experiences, oneself, and one's organization in new and different ways are exactly what is needed throughout the organization to bring about successful change. Thus, deliberate efforts to reduce anxiety (by acknowledging and avoiding the past mistakes that are so visible in reorganizing scripts) are not mere acts of kindness; they may be essential to the work group's enactment of the change.

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Implementing High Performance Work Systems: Planned Change or an Emergent Learning Process?

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This paper reports the results of research on the implementation of high performance work systems. The study assessed which of two competing theories of change—a planned change model or an emergent learning approach—best explained the events and processes of change described by practitioners and consultants involved in successful change efforts designed to create high performance work systems. An emergent learning approach a better job of explaining the events and processes of change. But as practitioners and consultants moved to generalize from their experiences, they tended to extract and share lessons learned in a way that was more consistent with a planned change model.

Research and practice suggest that the processes of change that create effective organizations are as important as the principles and practices themselves. Until the 1980s, Lewin's (1951) three-step model provided the foundation for most planned organizational change. Since then, the focus of much theory and practice has shifted to more comprehensive models of change.

Over the past decade, organizational transformation has emerged as a distinct form of organizational change (Kilman, Covin, et al., 1990; Porras & Silvers, 1991). Organizational transformation is aimed at the planned change of both organizational vision and work settings, to create cognitive and behavioral change that will help an organization or system better fit or shape future environments. Compared with traditional OD models of planned change, organizational transformation aims for broader and deeper change, over a longer time horizon. Organizational transformation efforts typically aim to redesign work processes, organization and work structures, and a variety of supporting systems including human resource, information, and management systems. The variables targeted by organizational transformations approaches—organizational vision and mission, leadership, culture, strategy—affect a deeper level in the organization than those traditionally targeted for change by organization development. Often, organizational transformation efforts seek to change the mental models that underlie organizational structures and processes. An example is the paradigm shift from "production-driven" to "customer-responsive" which alters existing behaviors, creates new behaviors, and gives individual employees a totally new way of viewing their work. The large-scale and complex changes that many organizations are now undertaking typically entail multiple transitions, that last from three to seven years, and uncertain future states.

To date, there have been few systematic empirical studies of transformational change (cf. Beer, Eisenstat & Spector, 1990). The existing empirical literature consists primarily of single case studies of large-scale change and systematic studies of "small change". Most of our knowledge concerning large-scale organizational change thus comes from practice, provided in accounts and prescriptions written by academics and consultants who have been involved in large-scale change projects.

Approaches to transformational change reflected in that literature fall along a continuum with a traditional OD emphasis on "planned change" at one end (Beckhard & Pritchard, 1992) and an emphasis on "emergent learning processes" (Watkins & Marsick, 1996) at the other. Most planned change models employ a diagnostic framework, which includes a process for assessing the current state of the organization and its capabilities, for determining the desired future state, the changes in policy and practices required to reach it, and an action strategy for closing the gap. Such an approach typically assumes that leaders have a clear vision of what the organization should look like at some future state or date. The change process assumes that goals have been set and aligned, and results are emphasized in monitoring and assessing change.

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In contrast, an emergent learning model employs an action framework, in which values are clarified and a powerful, but emerging, vision is relied upon to guide change. A driving force for change is identified that is consistent with the vision, and the implementation of change depends on feedback and continual readjustment There is an expectation that goals will evolve, and change is deliberately implemented in a learning mode, emphasizing both the process of improvement and results in monitoring and assessing change. Whereas most planned change models enumerate a set of logical steps to be followed in implementing change, often with a preferred order or sequence, an emergent learning model anticipates a messy trial and error process, that can begin at many different points, and is iterative at every stage.

High Performance Work Systems

High Performance Work System (HPWS) is a term that has appeared with increasing frequency in discussions about the changing nature of work, and about organizational change and restructuring. To many, a High Performance Work System represents a new vision of an effective workplace that has emerged from the experiences of best practice companies and plants. Although there is no single agreed-upon definition of a high performance work system, nor consensus about a fixed set of components or practices, there is considerable agreement about a core set of ideas or principles underlying HPWS. These include:

- the philosophy that competitive advantage can be achieved through the strategic use of people
- the principle that work structures and processes are organized to maximize customer responsiveness and organizational learning
  - work is typically organized around customer-focused processes
  - structure and systems are organized to facilitate focus, accountability, and responsiveness
- human resource policies and practices—from selection and training, to compensation and career development—that seek to build employees' motivation, skill, and flexibility, and to align individual interests with those of the organization
- new approaches to leading and managing that are consistent with these philosophies, ways of organizing work, policies and practices

The concept of HPWS implies a systems approach to organizational design and change. Alignment is a key. Business strategy is aligned with the demands of the environment. Goals are aligned with the business strategy, and aligned at different levels, for different units and processes. All internal systems—structures, subsystems, policies, and practices—are aligned with the organization's goals and with each other. The implementation of HPWS involves a systemic approach to organizational change that ensures the effective alignment and integration of work design, people, process, information, and technology. Much of the literature on high performance work systems—with its emphasis on setting and aligning goals, designing or redesigning the organization's structures and processes, and developing and following detailed implementation plans-- seems to favor a planned change model.

This study sought to assess which of the two competing approaches did a better of job of accounting for the events and processes of change described by practitioners and consultants involved in successful transformational change efforts designed to create high performance work systems.

Research Question

Which of two competing theories of change—a planned change model or an emergent learning process approach—best explains the events and processes of change described by practitioners and consultants involved in successful transformational change efforts designed to build high performance work systems?

Methodology

To answer this question, the study analyzed data on the implementation of high performance work systems that were collected during 1995-96. The data included in-depth interviews with practitioners and consultants as well as groupware output from a workshop which many of them attended in January 1996 to share their experiences with implementing high performance work systems (Gephart & Van Buren, 1996).

In-depth interviews and focus groups were conducted with managers in organizational units of three Fortune 100 companies that were identified by corporate staff as exemplary high performance work systems. Telephone interviews were conducted with six corporate staff, who in their roles as internal consultants in five Fortune 100 companies, assisted with planning and managing change to implement high performance work systems in plants and business units within their companies. Telephone interviews were also conducted with seven external consultants who had assisted many, diverse companies in their attempts to implement transformational change to create high performance work systems.

All of the managers and consultants who were interviewed were asked to describe their experiences with large-scale change efforts undertaken to implement high performance work systems and to share lessons learned, including critical success factors and dilemmas. They were asked about the impetus for change and how change efforts got started, about the roles of leaders and managers, and of internal and external consultants, in the process. They were asked to describe the changes that occurred, how, and in what order; whether there was an identifiable sequence of steps in successful change efforts, and whether a change model was used in those efforts. They were also asked about problems and obstacles encountered, mistakes made and lessons learned, and conditions that seemed critical for success. In addition to the interviews, groupware output was analyzed from three sessions in the workshop that focused on the process of implementing change and experiences of the participants in implementing HPWS which raised interesting challenges, issues, or dilemmas.

Segments of the transcribed interviews and groupware comments which (1) included accounts, syntheses, or interpretations of change events and processes, or (2) presented lessons learned, guidelines, or models for change that were used in or derived from those experiences, were coded if they clearly reflected a theory of change. Segments were coded PC (planned change), EL (emergent learning), or M (mixed), depending on which approach best accounted for their contents.

Preliminary analysis of the coded segments indicated significant differences in the extent to which the competing theories of change explained (1) accounts of actual events in the change processes in particular organizational units as contrasted with guidelines or lessons learned that were extracted from or based on those experiences; and (2) events and experiences reported by managers and internal consultants as contrasted with those reported by external consultants. In a subsequent analysis, segments of the transcribed interviews and groupware comments were sorted and analyzed according to the roles of the respondents—manager (M), internal consultant (IC), external consultant (EC)—and four categories of statements: (1) accounts of actual events in the change processes in particular organizational units (DESCR); (2) synthetic and interpretive statements made by individuals to make sense of and extract lessons from their varied, but direct, experience with large-scale change (INTRP); (3) statements designed to communicate those lessons and learnings to others (SHRLRN); and (4) statements at the workshop designed to make collective sense of shared experiences and lessons learned (COLLRN).

Results

The results of the analyses indicate that overall, an emergent learning model did a better job than a planned change model of accounting for managers' and consultants' experiences with implementing large-scale change designed to create HPWS. However, the explanatory power of the two theories of change differed, depending on the role of the respondent (M, IC, EC) and the category of statement (DESCR, INTRP, SHRLRN). An emergent learning model did a better job of accounting for the events and experiences reported by managers and internal consultants, and for the descriptions of actual change processes and events and syntheses and interpretations of those direct experiences (DESCR and INTRP). A planned change model did a better job of accounting for statements that shared lessons learned or presented prescriptive principles and guidelines derived from experience (SHRLRN) and for statements

that attempted to make sense of shared experiences during the workshop (COLLRN). A planned change model also did a better job of accounting for the reports and experiences of some, but not all, of the external consultants.

The three sources of data differed in the proportions of the participants in different roles (M, IC, EC), and in the proportions of coded segments that were classified in the different categories of statements (DESCR, INTRP, SHRLRN, COLLRN). Hence, the results of the analyses are summarized separately for each of the three data sources.

Exemplary Plants/Business Units Two of the exemplary units were greenfield manufacturing plants. The third was a customer service unit. Interviews about the change events and processes in those units were conducted with managers during site visits. Most of the managers' statements were descriptive accounts of actual events in the design and implementation of change in their unit (DESCR). A smaller number were summarizing and interpretive statements that made sense of or extracted lessons from their direct experiences (INTRP).

Both of the plants used a modified sociotechnical systems model to design their technical and social work systems. Not surprisingly, accounts of the original design and implementation were best explained by a planned change model. However, accounts of the evolution of those systems and of the design, implementation, and ongoing modification of various support systems were better explained by an emergent learning model. The customer service unit used an empowered teams approach to designing and implementing its high performance work system. An emergent learning model did a better job than a planned change model of explaining the events and processes of change described by managers in that unit.

Managers interviewed in all three sites described a process of trial and error discovery in the lengthy (7-10 years) evolution of their goal setting and alignment, work processes, information systems (especially those needed to support self-managing teams), and human resource systems and practices, including recruitment and selection, compensation, performance management, and training and development. In all three sites, accounts of the actual course of implementing change reflected an action learning approach.

Interviews with Internal (Corporate Staff) and External Consultants The theory of change that was most consistent with the events and processes discussed by internal and external consultants in their telephone interviews depended on both the role of the respondents and on the types of statements they made. Interview segments which reflected a theory of change were coded for that theory (PC - planned change; EL - emergent learning; or M - mixed). and for the type of statement (s) made in it (DESCR, INTRP, or SHRLRN). Frequencies were tallied for each of the three change theory codes by type of statement, within and across respondents.

For eight of the twelve respondents (one manager, three of five internal consultants, and four of six external consultants), the change theory that best accounted for statements in the codable segments of their interviews varied systematically with the type of statement. For those eight, DESCR and INTRP statements were much more likely to reflect an emergent learning model, and SHRLRN statements were more likely to reflect a planned change model. For the remaining four respondents, a preponderance of their statements in every category reflected an emergent learning change model. A subsequent rereading of their transcripts suggested that they all operated with strong mental models that reflected an emergent learning approach.

Although each interview contained all three types of statements—DESCR, INTRP, SHRLR—the relative frequency of the three types varied with the repsondent's dominant role. Since the interviews also varied considerably in length, to facilitate analysis across respondents, each interview was also coded for its modal type of statement and the dominant change theory that it reflected. Table 1 displays relationships between respondents' dominant role, modal type of statement, and dominant change theory.

Table 1. Respondents' Dominant Change Theory by Dominant Role and Modal Type of Statement

	DESC	INTRP	SHRLRN
Manager (N=1)	1 EL		
Internal Consultant (N=5)	2 EL M-EL	2 EL	1 M-BAL
External Consultant (N=6)			3 EL-2 M-PC
		3 EL-2 M-PC	

EL = Emergent learning
M-EL = Mixed, emergent learning
M-BAL = Mixed, balanced
M-PC = Mixed, planned change

The dominant role of one of the twelve respondents was manger; five were internal consultants, and six were external consultants. Nine of the twelve respondents could be classified as making a modal type of change statement: three were DESC, two were INTRP, and four were SHRLRN. The statements made by the remaining three respondents were evenly spread across the three types.

In seven of the twelve interviews, an emergent learning model explained a preponderance of the coded segments. The remaining five were all mixed models. None of the interviews reflected a predominately planned change model. Of the mixed models, one was balanced between PC and EL, two emphasized a PC approach and two emphasized an EL approach,

As indicated in Table 1, the modal type of statement made by respondents varied systematically with their dominant role. The modal statements of the manager and four of the five internal consultants were DESCR or INTRP, whereas the modal statements of four of the six external consultants were SHRLRN. The remaining external consultants did not have a modal type of statement.

For the nine respondents whose interviews could be classified with a modal type of statement, their dominant change theory was related to the modal type of statement. The dominant change theories of the five respondents whose modal type of statement was DESCR or INTRP were emergent learning models or mixed models that emphasized an emergent learning approach. The dominant change theories of the four respondents whose modal type of statement was SHRLRN were more varied: two were emergent learning models and two were mixed models, one of which emphasized a planned change model

and one was balanced. Two of the three respondents whose interviews could not be classified by a modal type of statement had an emergent learning dominant change theory and one had a mixed model, emphasizing a planned change approach.

Workshop on Implementing High Performance Work Systems Groupware output was analyzed for the three workshops sessions that focused on the process of implementing change. Because some comments carried the initials of participants and others were made anonymously, it was not possible to extend the analyses of individual respondents' telephone interviews to include their groupware comments. As a result, groupware comments were analyzed at an aggregate level only. Comments focused on the process and steps of implementing change were predominately comments which shared lessons, principles or guidelines (SHRLRN), or attempted to made sense, in the groupware interactions, of the collective experiences reported (COLLRN). Those comments reflected a mix of emergent learning and planned change models.

In contrast to participants' individual interviews, in which emergent learning models were the dominant models of change overall, planned change models were the dominant models consistent with these comments. Approximately 60% of the groupware comments about the process and steps in implementation were consistent with a planned change model. The remainder were more consistent with a mixed or emergent learning model. Comments reporting specific experiences implementing HPWS which raised interesting challenges, issues, or dilemmas, however, were predominantly DESCR or INTRP, and were overwhelming consistent with an emergent learning model.

Discussion and Conclusion

The results of this research indicate that overall, an emergent learning model did a better job of explaining accounts and interpretations of large-scale change efforts undertaken to implement high performance work systems than a planned change model. But, the results also suggest that as practitioners and consultants moved from descriptions of actual change processes and events to extract lessons from their varied experiences of large-scale change, and to communicate those lessons to others (SHRLRN), or make collective sense of their shared experiences and lessons (COLLRN), events and processes that were originally described in a way that was consistent with an emergent learning approach to change were increasingly presented as components of a systematic framework or as sequential steps in a planned change model for implementing high performance work systems. These results suggest that there is a tendency for a planned change model to be used as practitioners and consultants seek to generalize lessons from their experience, and not surprisingly, that external consultants tend to have and use planned change models more than managers and internal consultants

Several explanations can account for these results. One interpretation is that the change events described by managers and corporate staff in this project tended to precede the development of planned change models and approaches. Early efforts to build high performance work systems, such as those described by participants in this study, were begun at a time when there was little shared knowledge or experience about the key components that needed to be included and aligned, and the supporting systems that needed to be developed and implemented. As experience accumulated, process models of change were developed, based on the growing body of knowledge about implementing large-scale change efforts. External consultants, who have experience working with diverse organizations on large-scale change efforts are better able to synthesize knowledge gained from their work in diverse settings and to codify that knowledge in the form of process models which they then use to guide future efforts requiring large-scale transformational change.

The results are also consistent with another interpretation, however. As practitioners and consultants attempt to document their learning and provide a useful road map for other organizations, they may reconstruct their original accounts of messy, emergent processes of change, crises, and learning, into models for planned change, systematic frameworks, and blueprints. In doing so, they may present a process that is more rational and top-down than it had originally been reported—sometimes in the guise of "given what we've learned, how should it be done" or "how would we do it now if we were starting from scratch." Even when such models and frameworks were presented with caveats such as " typically

the steps do not occur in a fixed sequence" or " of course the process of change is iterative," they were frequently interpreted during collective sense making discussions and groupware interactions as providing the basis for a model of planned organizational change that was often said to be best implemented through a top-down initiative.

Contributions to HRD

The results of this research suggest that an emergent learning process may be the norm in large-scale transformational change, even when an emergent learning model is not the mental model guiding change, as in the case of implementing high performance work systems. The results also underscore the importance of mental models for how experience is reconstructed and shared. Even when change resembles an emergent learning process, it may be reconstructed as a more orderly, logical, and even planned change process if the dominant mental model is one of planned change. One reason for the growing popularity of learning organization models may be that the assumption of messy, trial and error change, which may correspond better with reality than the dominant planned change model, is built into the models themselves.

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